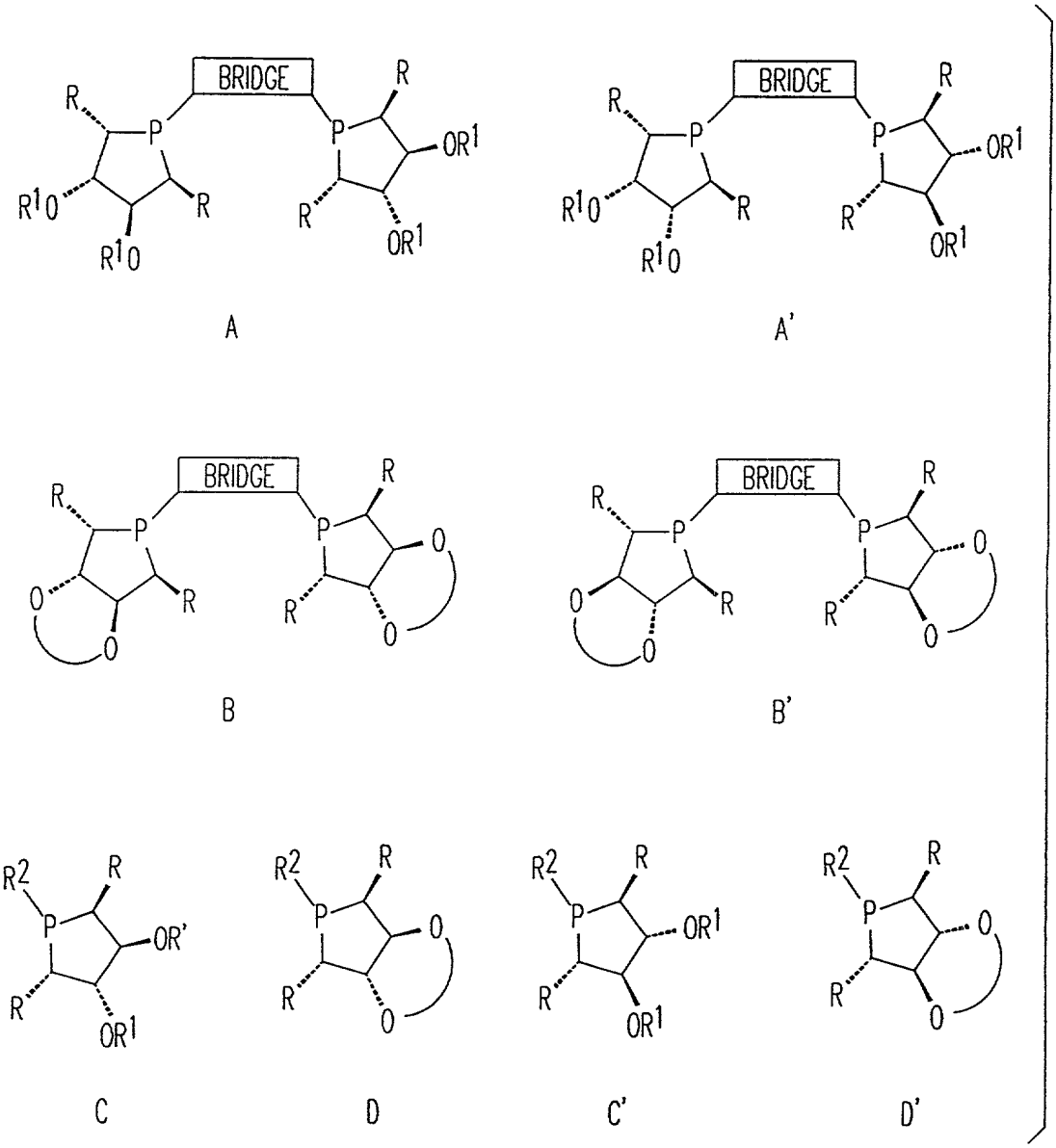
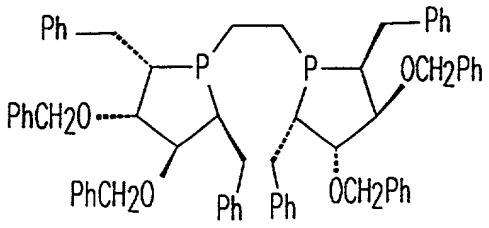
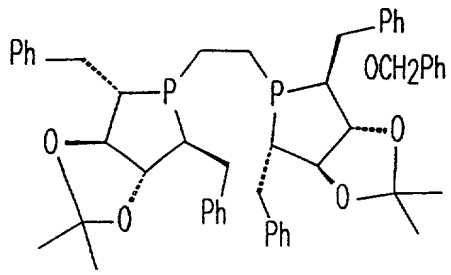


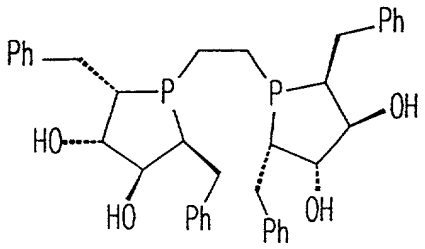
FIG. 1



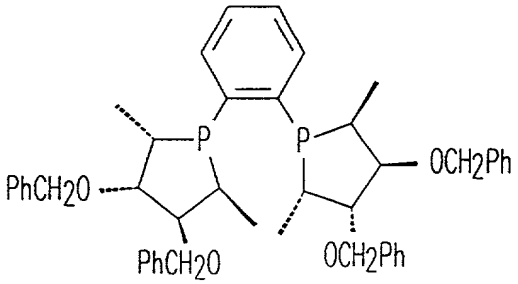
L1 (A)



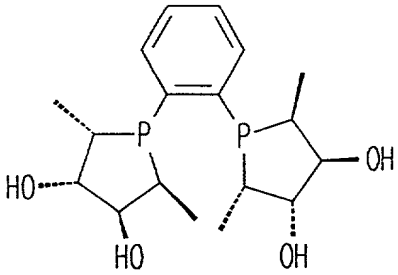
L2 (B')



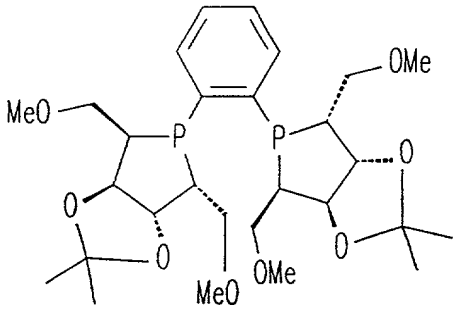
L3 (A)



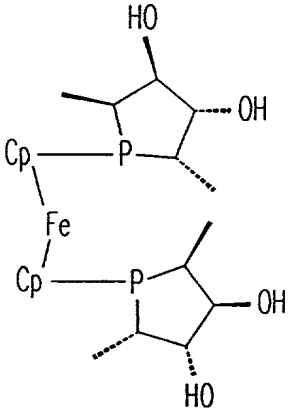
L4 (A)



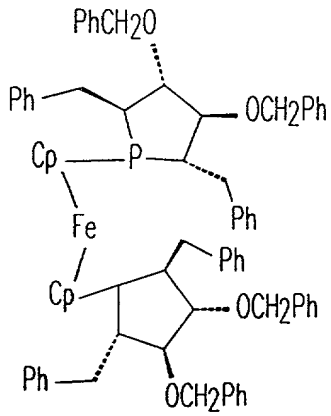
L5 (A)



L6 (B)

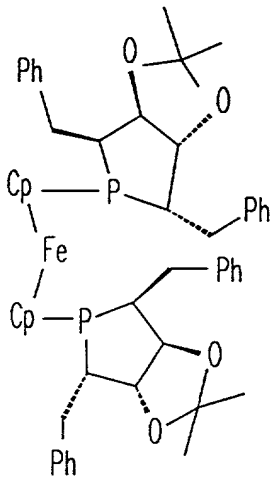


L7 (A)

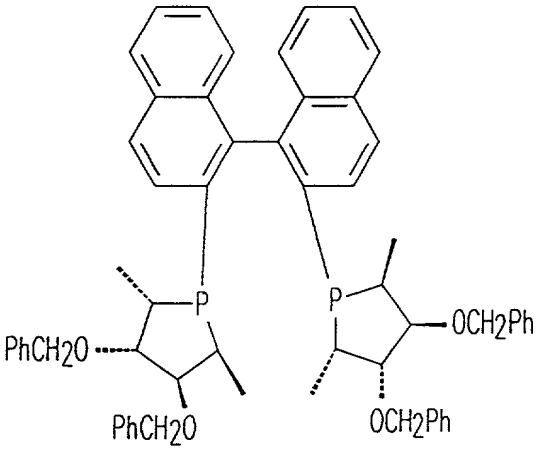


L8 (A')

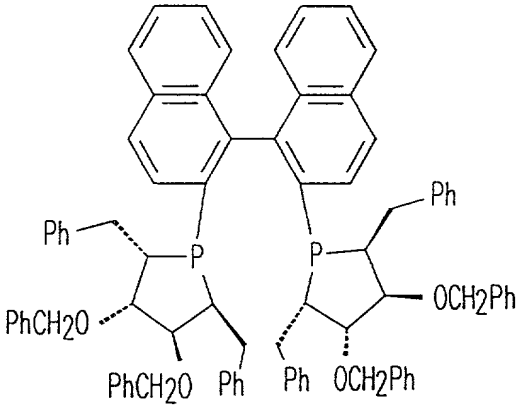
FIG. 2A



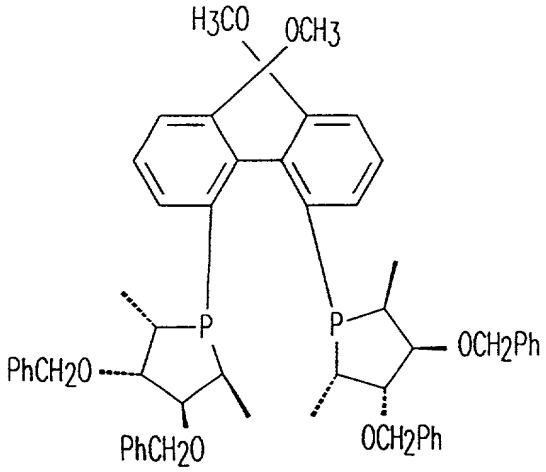
L9 (B)



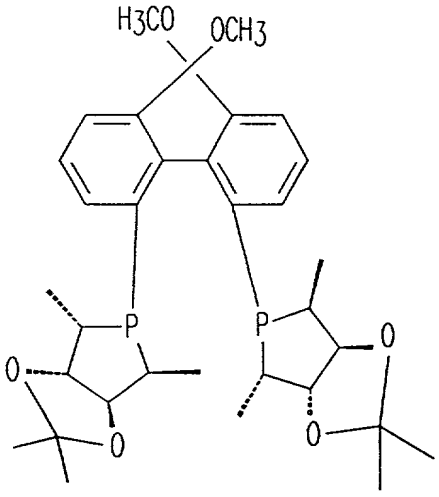
L10 (A)



L11 (A)

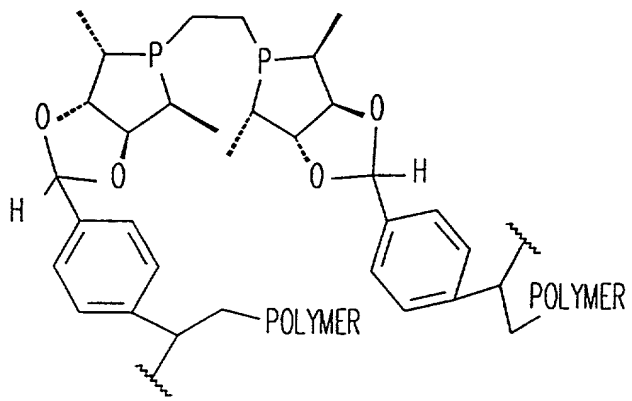


L12 (A)

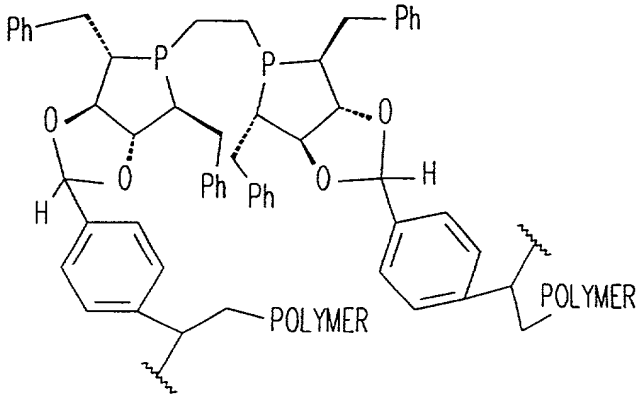


L13 (B)

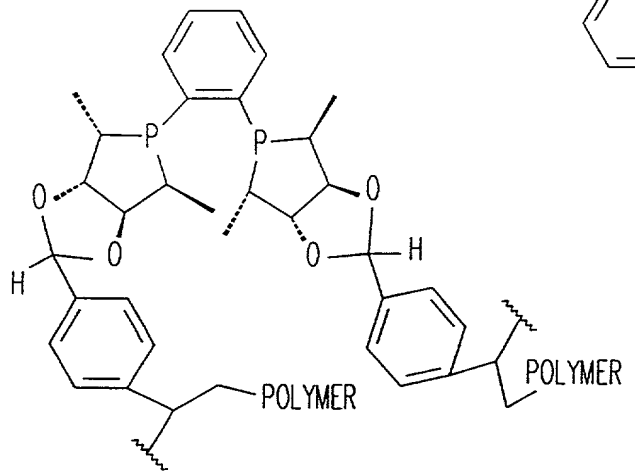
FIG. 2B



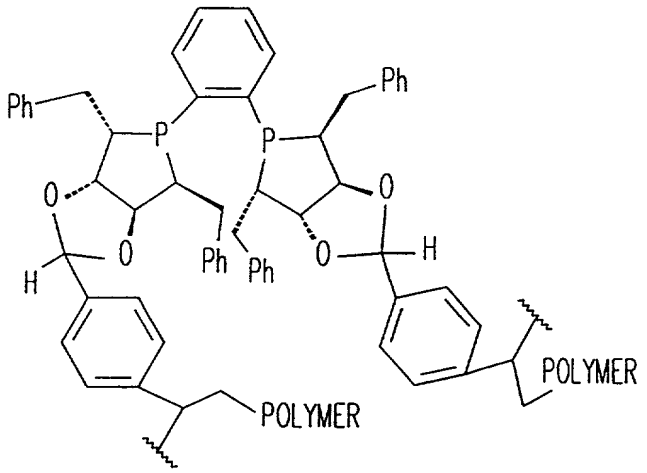
L14 (B)



L15 (B')

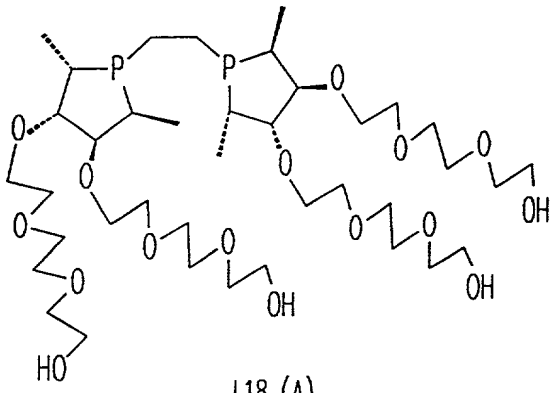


L16 (B)

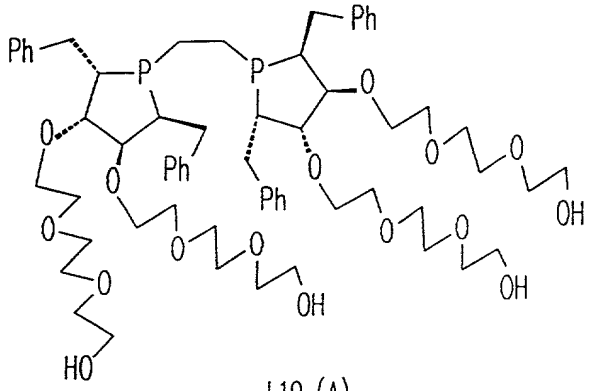


L17 (B)

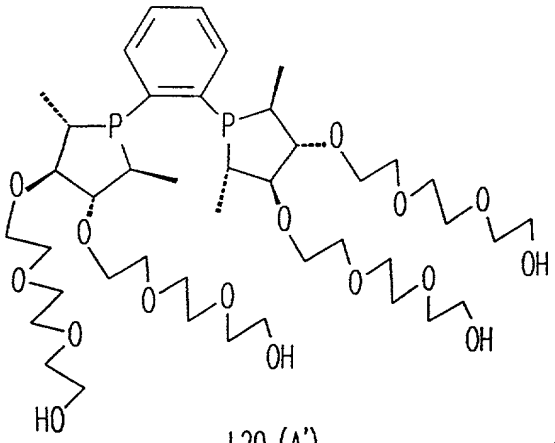
FIG. 2C



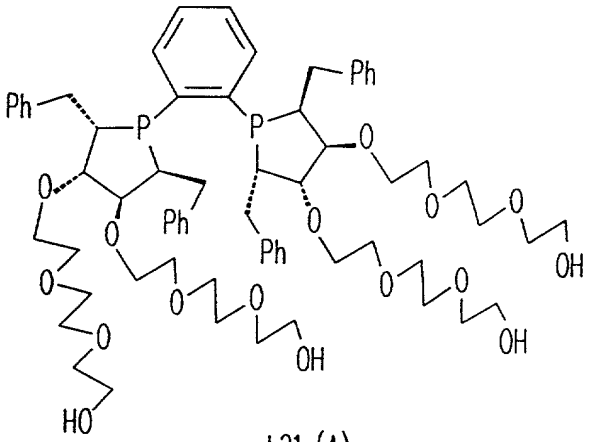
L18 (A)



L19 (A)

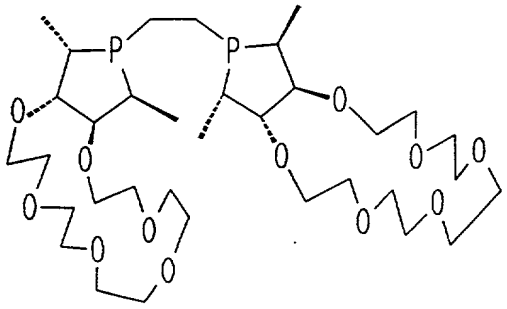


L20 (A')

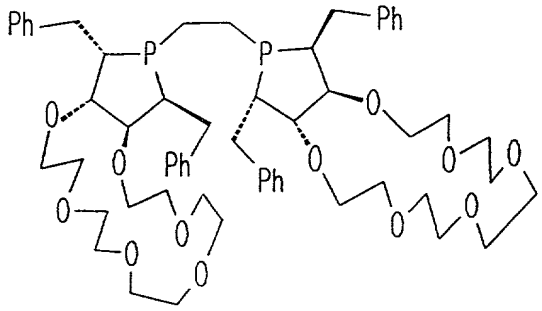


L21 (A)

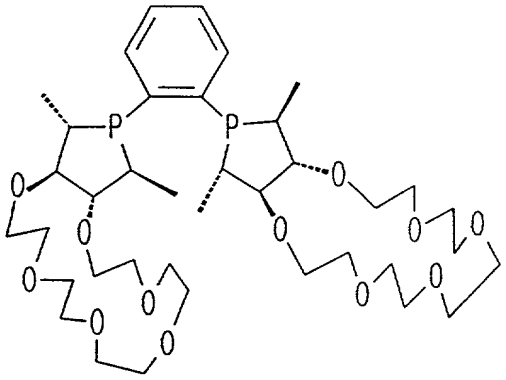
FIG. 2D



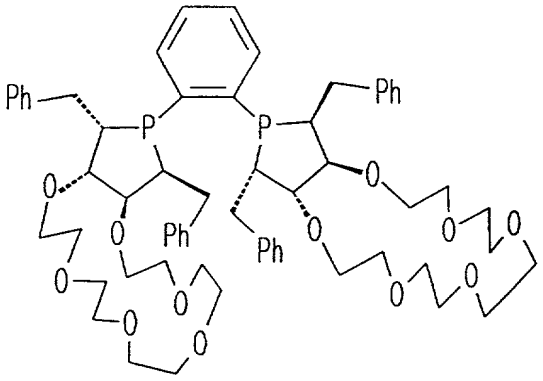
L22 (B)



L23 (B)

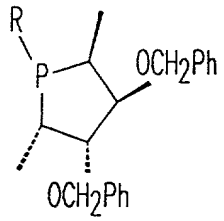


L24 (B')

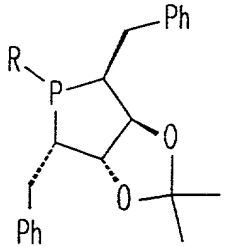


L25 (B)

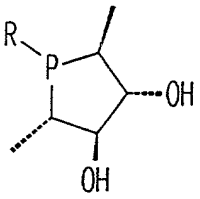
FIG. 2E



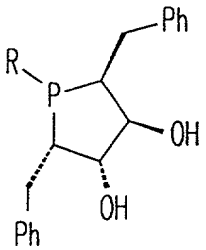
L26 (C)



L27 (D)

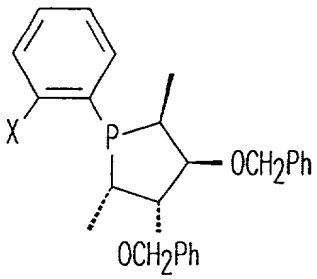


L28 (C')

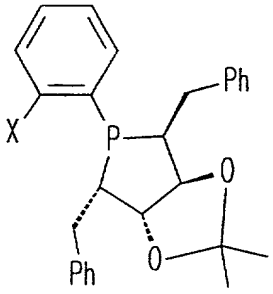


L29 (C)

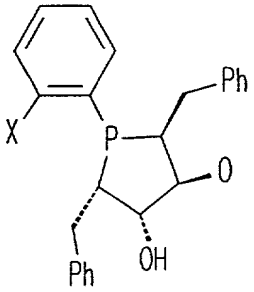
R = H,Me, Et, Cy, Ph, etc.



L30 (C)



L31 (D)



L32 (C)

X = CHIRAL OXAZOLINES, COOH, OMe, OH, SMe, SH, NR'_2, PPh_2

FIG. 2F

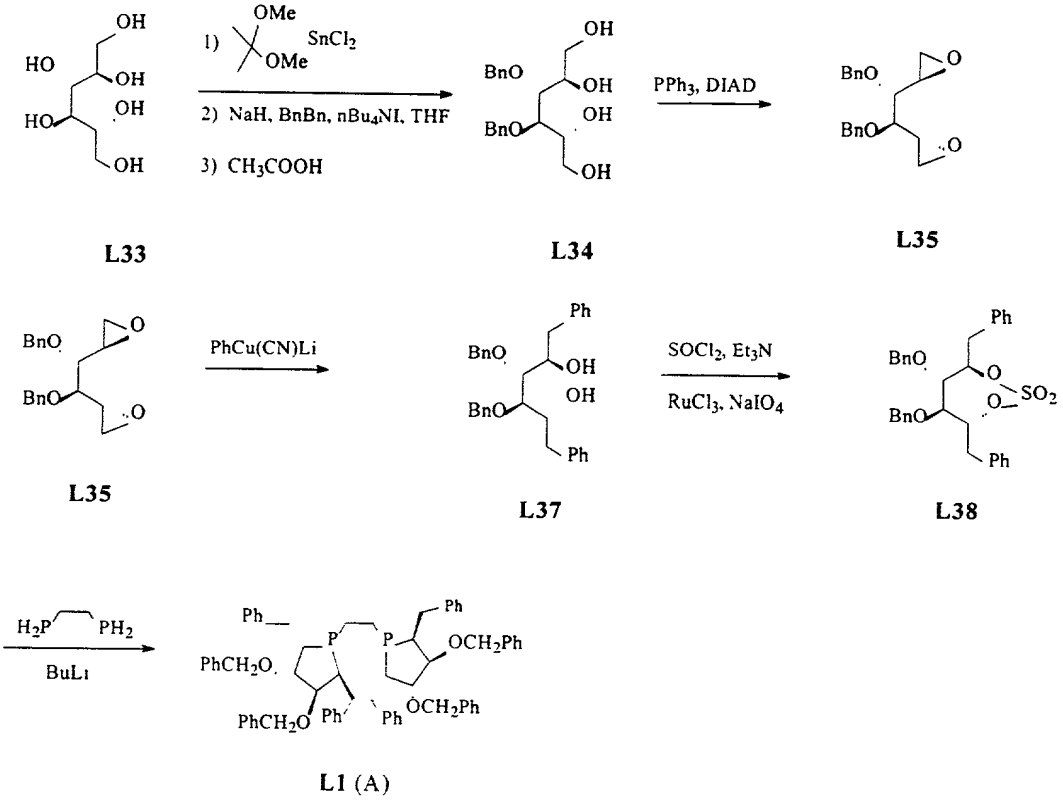
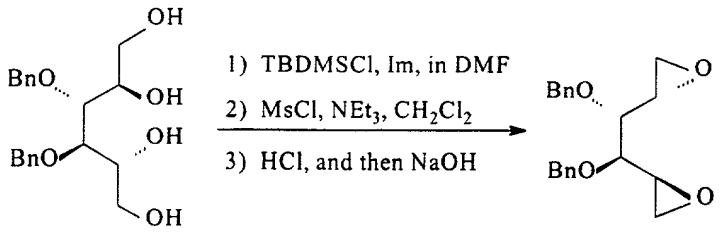
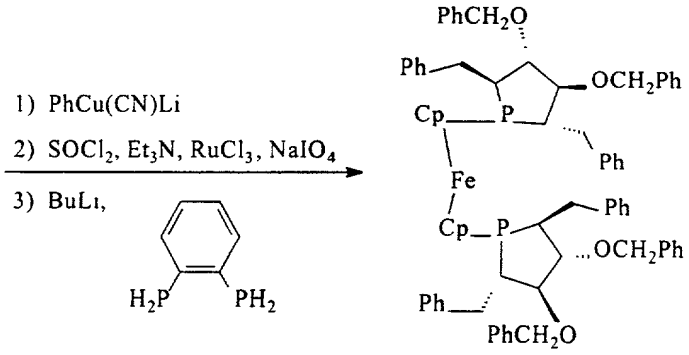

OH
HO
OH
HO
OH
OH
1) OMe SnCl2 OMe
2) NaH, BnBn, nBu4NI, THF
3) CH3COOH
BnO
OH
BnO
OH
OH
PPh3, DIAD
BnO
O
BnO
O
L33
L34
L35
BnO
O
BnO
O
PhCu(CN)Li
Ph
BnO
OH
OH
BnO
Ph
SOCl2, Et3N
RuCl3, NaIO4
Ph
BnO
O
O
SO2
BnO
Ph
L35
L37
L38
H2P
PH2
BuLi
Ph
P
P
Ph
OCH2Ph
PhCH2O
PhCH2O
Ph
Ph
OCH2Ph
L1 (A)

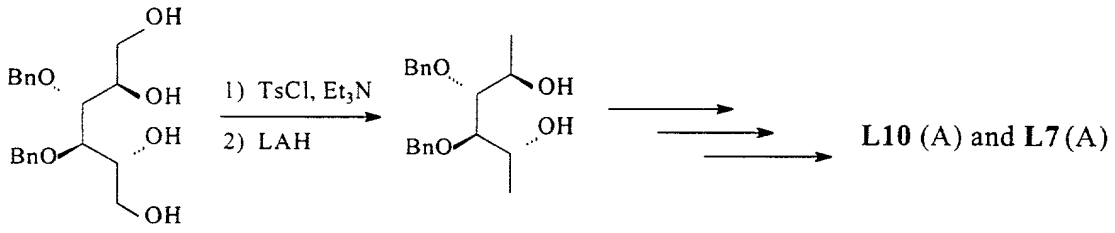
FIG. 3A



L34 L35'



L8 (A')



L34 L36

FIG. 3B

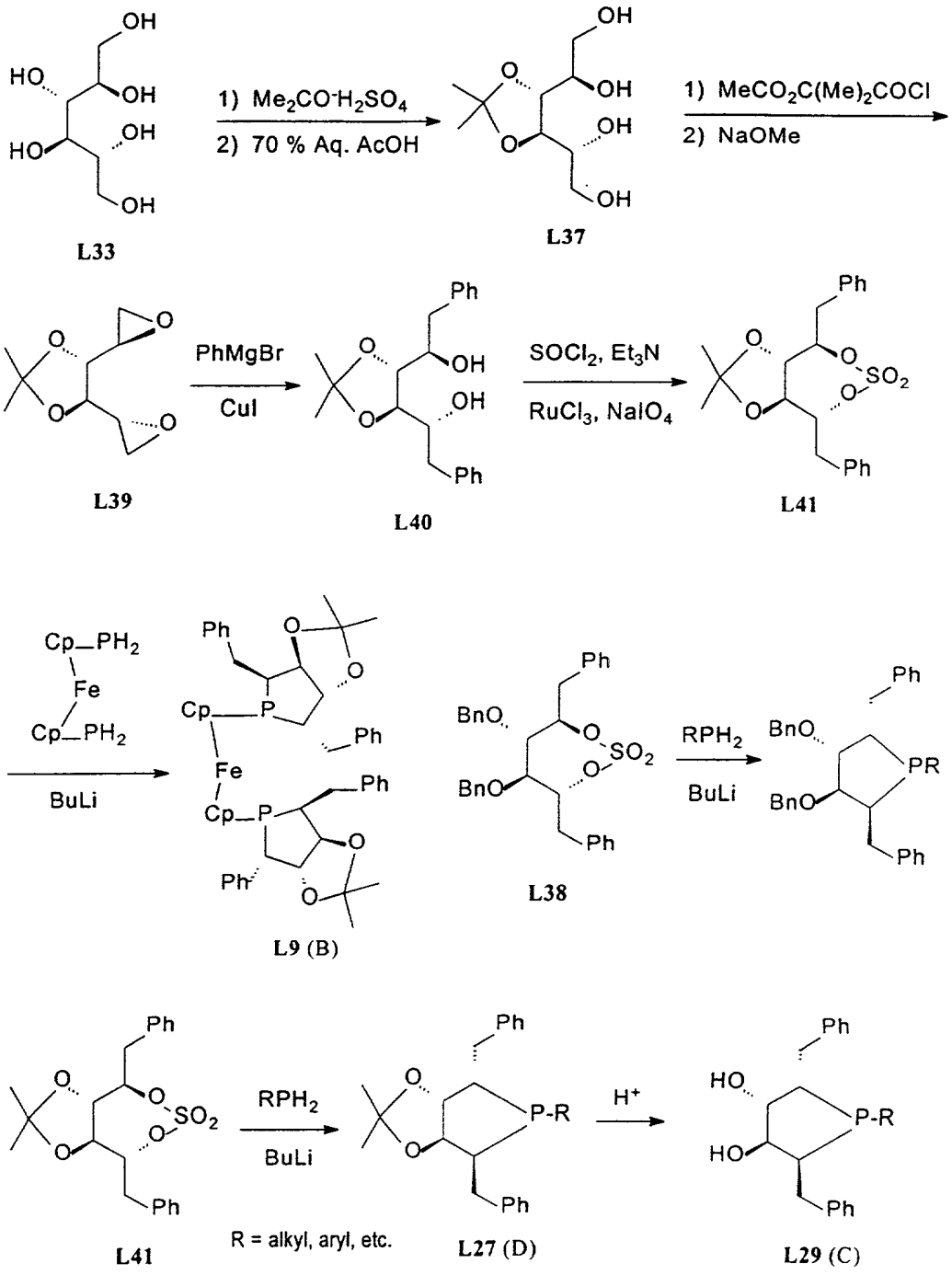

L33
1) Me_2CO-H_2SO_4
2) 70 % Aq. AcOH
L37
1) $MeCO_2C(Me)_2COCl$
2) NaOMe
L39
PhMgBr
CuI
L40
$SOCl_2$, Et_3N
$RuCl_3$, $NaIO_4$
L41
$Cp-PH_2$
Fe
$Cp-PH_2$
BuLi
L9 (B)
L38
RPH_2
BuLi
L41
RPH_2
BuLi
R = alkyl, aryl, etc.
L27 (D)
H^+
L29 (C)

FIG. 3C

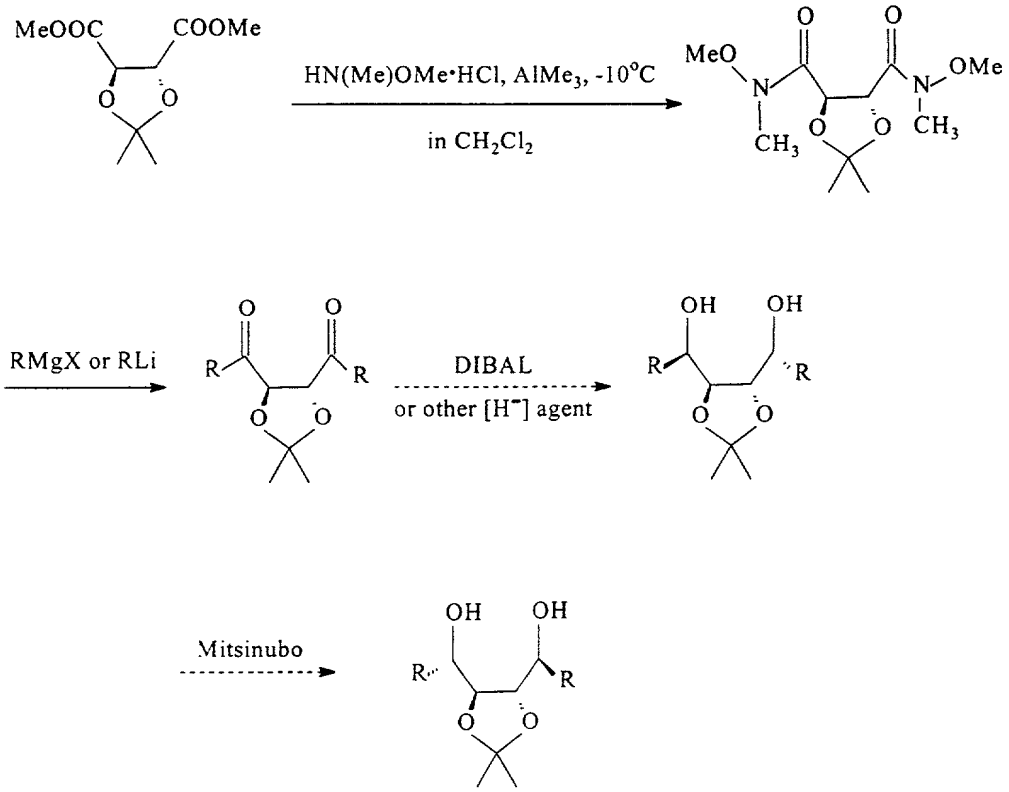
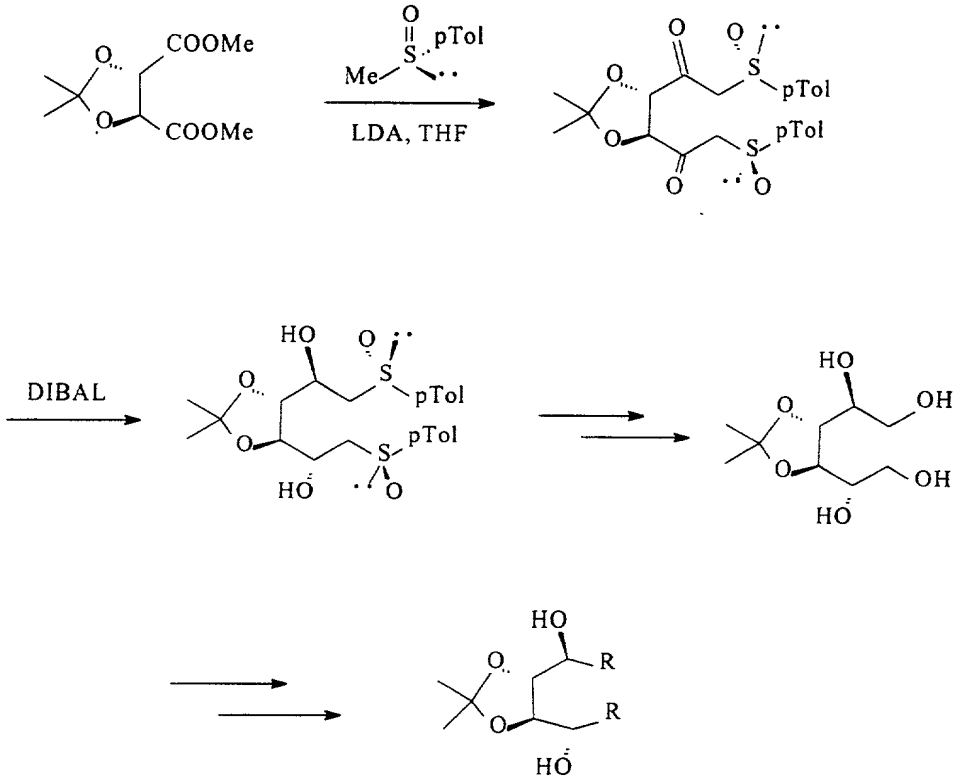

MeOOC
COOMe
HN(Me)OMe·HCl, AlMe3, -10°C
in CH2Cl2
MeO
OMe
CH3
CH3
RMgX or RLi
DIBAL
or other [H⁻] agent
OH
OH
Mitsinubo

FIG. 4A



R = Me, Et, CH_2Ph, etc.

FIG. **4B**

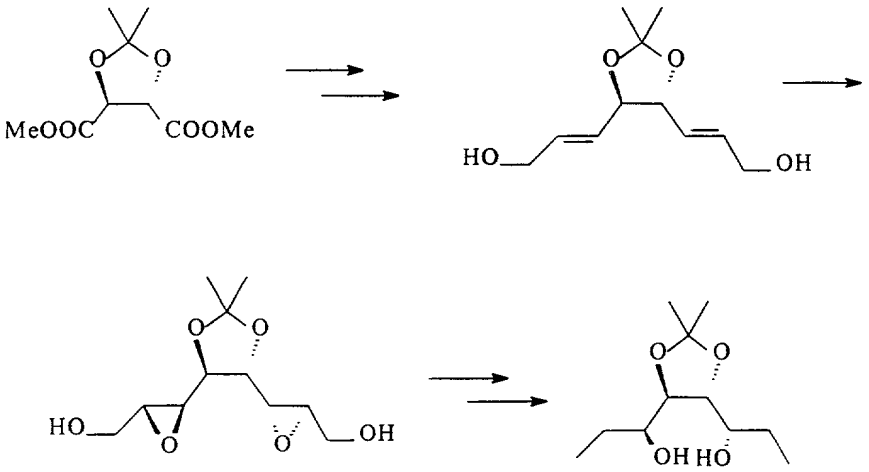


FIG. **4C**